Exhibit K

U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives

Firearms Technology Criminal Branch
Report of Technical Examination

[redacted]

Phone: [redacted]
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To:

Special Agent Prince Planthara
Bureau of Alcohol, Tobacco, Firearms and Explosives
[redacted]

UI#: [redacted]

RE: DEBORBA, Joao Ricardo

FTCB#: [redacted]

Date Exhibit Received: 06/21/2022

Delivered By: FedEx [redacted]

Type of Examination Requested:

Examination, Test, Classification

Exhibit:

1. Cylindrical device; no manufacturer markings, no serial number (suspected silencer).

Pertinent Authority:

Title 28 of the United States Code (U.S.C.) provides the Bureau of Alcohol, Tobacco Firearms and Explosives (ATF) the authority to investigate criminal and regulatory violations of Federal firearms law at the direction of the Attorney General. Under the corresponding Federal regulation at 28 CFR § 0.130, the Attorney General provides ATF with the authority to investigate, administer, and enforce the laws related to firearms, in relevant part, under 18 U.S.C. Chapter 44 (Gun Control Act) and 26 U.S.C. Chapter 53 (National Firearms Act). Pursuant to the aforementioned statutory and regulatory authority, the ATF Firearms and Ammunition Technology Division (FATD) provides expert technical support on firearms and ammunition to federal, state and local law enforcement agencies regarding the Gun Control Act (GCA) and the National Firearms Act (NFA).

The Gun Control Act of 1968 (GCA), 18 U.S.C. § 921(a)(3), defines the term "**firearm**" as:

"*...(A) any weapon (including a starter gun) which will or is designed to or may readily be converted to expel a projectile by the action of an explosive; (B) the frame or receiver of any such weapon; (C) any firearm muffler or silencer or (D) any destructive device. Such term does not include an antique firearm.*"

The GCA, 18 U.S.C. § 921(a)(25) defines the terms "**firearm silencer**" and "**firearm muffler**" to mean:

"*...any device for silencing, muffling, or diminishing the report of a portable firearm, including any combination of parts, designed or redesigned, and intended for use in assembling or fabricating a firearm silencer or firearm muffler, and any part intended only for use in such assembly or fabrication.*"

The National Firearms Act (NFA), 26 U.S.C. § 5845(a), defines "**firearm**" as:

"...(1) a shotgun having a barrel or barrels of less than 18 inches in length; (2) a weapon made from a shotgun if such weapon as modified has an overall length of less than 26 inches or a barrel or barrels of less than 18 inches in length; (3) a rifle having a barrel or barrels of less than 16 inches in length; (4) a weapon made from a rifle if such weapon as modified has an overall length of less than 26 inches or a barrel or barrels of less than 16 inches in length; (5) any other weapon, as defined in subsection (e); (6) a machinegun; (7) any silencer (as defined in 18 U.S.C. § 921); and (8) a destructive device. The term "firearm" shall not include an antique firearm or any device (other than a machinegun or destructive device) which, although designed as a weapon, the ... [Attorney General] ... finds by reason of the date of its manufacture, value, design, and other characteristics is primarily a collector's item and is not likely to be used as a weapon."

Also, the NFA, 26 U.S.C. § 5842, "**identification of firearms**," states:

"*...(a) Identification of firearms other than destructive devices. - Each manufacturer and importer and anyone making a firearm shall identify each firearm, other than a destructive device, manufactured, imported, or made by a serial number which may not be readily removed, obliterated, or altered, the name of the manufacturer, importer, or maker, and such other identification as the Secretary may by regulations prescribe. (b) Firearms without serial number. - Any person who possesses a firearm, other than a destructive device, which does not bear the serial number and other information required by subsection (a) of this section shall identify the firearm with a serial number assigned by the Secretary and any other information the...[latter]... may by regulations prescribe.*"

Background:

ATF has a long history of looking at the design features of a particular item when determining whether an item is a "firearm silencer" under Federal law, including whether it has design features of a part designed to be used in a "firearm silencer."

The law encompasses any combination of parts designed or redesigned, and intended for use in assembling or fabricating a firearm silencer or muffler. Moreover, the statute does not limit the definition of silencer to "a device that silences, muffles, or diminishes." United States v. Syverson, 90 F.3d 227,232(7th Cir. 1996)

Similarly, in *United States v. Carter* 465 F.3d 658(6th Cir.2006), the Sixth Circuit Court of Appeals found that the statute did not require that a silencer actually diminish the report of a firearm, noting that the "language of the statute focuses on the intended application of a silencer, not its actual demonstrated operation." Congress did not use such wording as "capable of silencing" or "that silences." The word choice of Congress indicates a concern for the purpose of the mechanism and the parts thereof, not the function.

When ATF examines a possible silencer part, it compares that item to known silencer designs to provide a context for those features to determine whether the subject item should be classified as a silencer under Federal law. The presence of the design characteristics and reported purpose of the item are important factors in determining whether it should be classified as "any combination of parts, designed or redesigned, and intended for use in assembling or fabricating a firearm silencer or firearm muffler," or "any part intended only for use in such assembly or fabrication."

A part need not be 100% complete in order to be considered a "silencer part" as regulated under the GCA and NFA. It need only be manufactured to the point where a critical line has been crossed or critical feature(s) formed to make it recognizable as a silencer part. Once completed to the point of recognition, a part must be regulated as the completed silencer part. To find otherwise would lead to a result that permits manufacturers, importers, or dealers, to avoid "completing" a device or silencer part in order to circumvent government regulation specifically intended by Congress. Therefore, a component, part, assembly, or end item, need only be completed to the point at which it can be recognized as a regulated item based on the objective characteristics of that item which identifies the device as a regulated article.

For your information, any part used (or if intent for use is demonstrated) in the assembly of a device for silencing, muffling or diminishing the report of a portable firearm, would be classified as a "firearm silencer" as defined in 18 U.S.C. § 921(a)(24) and a "firearm" as defined in 18 U.S.C. 921 § (a)(3)(C) and 26 U.S.C. § 5845(a)(7) respectively. Therefore, any silencer part not included in an assembled silencer is required to be marked with the manufacturer's information and a serial number as required by 26 U.S.C. § 5842.

As background, there are multiple audible elements attributable to a firearm in operation including: the report (muzzle blast), the sound of the bullet in flight, and the sound of the firearm action. Firearm silencers are designed to reduce only the report of a portable firearm.

The report of a firearm is mostly the consequence of superheated, high-pressure propellant gases being rapidly released into the atmosphere.

Simplistic silencers typically consist of end-caps attached to each end of a hollow tube, which forms an "**expansion chamber**" (also referenced as a "blast chamber") within. The end-caps will each have a hole in the center to allow a bullet, followed by propellant gases, to pass through. The resulting device, when attached to a firearm barrel's muzzle, allows the hot propellant gases exiting the barrel to expand and cool prior to being slowly released into the open atmosphere which generally causes a reduction in the sound pressure level of a gunshot.

The first portion of an excerpt obtained from United States Patent 7,308,967 for a firearm silencer (sound suppressor) clearly describes the devices included in this report:

"A sound suppressor for a firearm for reducing sound and flash levels upon the discharge of a firearm comprises a cylindrical housing, a proximal end cap with means for attachment to a firearm and to a cylindrical housing, a distal end cap with means for attachment to the housing…"

The patent goes on to describe the interior component parts of the specific firearm silencer. Threaded outer tubes designed to accept proximal end caps, threaded to facilitate attachment to a firearm barrel, and distal end caps which form an expansion chamber (with or without internal baffles or other silencer component parts), are design features common to many firearm silencers.

The concept of an "expansion chamber" or "blast chamber" is frequently encountered in firearm silencers. Generally, an expansion chamber/blast chamber is located to be proximal to the mounting point of the firearm silencer (sound suppressor) to the barrel. In silencers incorporating a monolithic baffle core, the largest expansion chamber is typically placed at the base of the core. In designs incorporating individual baffles, often

a longer silencer baffle spacer is installed near the proximal barrel mounting portion of the silencer to form a larger chamber in that portion of the device. In firearm silencers/sound suppressors lacking interior baffles, the entire interior of the silencer can become one large expansion chamber/blast chamber. United State Patent No.: 8,292,025 B1 (see attachment), describes a "blast chamber" within the "Summary of the Invention" portion of the Patent documentation to include:

"The enlarged blast chamber traps and cools gases that are discharged by a fired bullet".

Additional components may serve to aid or enhance silencing, muffling, or diminishing the report of a portable firearm, by further reducing the speed, pressure, or rate of release of the propellant gases.

Typically, these additional components may include:

- Baffles or washers which create separate expansion chambers
- Ported inner sleeve or tube (bleed holes)
- Sound dampening material such as foam, steel wool, and other substances

Baffles or a "**monolithic baffle core**" in firearms silencers are designed to slow, create turbulence in, or redirect the flow of hot propellant gases, depending upon the baffle's particular design features. Further, baffles can be used to segregate a large expansion chamber to create multiple, smaller expansion chambers of various sizes by stacking several baffles together or by the use of spacers between baffles.

The Exhibit described in this report is consistent with many items misrepresented as "automotive filters" or "solvent traps" in a thinly veiled attempt at presenting a legitimate and legal use for these devices other than as firearm silencers or a combination of parts intended for use in assembling a firearm silencer. In actuality, these devices clearly meet the GCA definition of a firearm silencer and are intended to provide a means to skirt the laws and regulations governing the manufacture, sale, and transfer of firearms silencers.

Genuine inline fuel filters (e.g., a NAPA 4003 inline fuel filter) are designed to filter sediment, debris, or other contaminates from fuel pumped through the device. These devices are designed to be installed "inline" between the pump and nozzle end of the fuel hose. As such, fuel is pumped in one end, through the filter element contained inside the device, and out the opposite end.

Many illegitimate devices marketed as inline fuel filters have minimal filtering capabilities (or are devoid of a filter element and have no filtering capability at all) thereby severely limiting or negating any valid use as an inline fuel filter. As stated above, many of these devices are assembled in such a manner as to give the *appearance* of being a fuel filter but will not function as such.

Further evidence that these devices are not intended to be fuel filters is the fact that many of these devices are manufactured with threads that are not compatible with any known fuel fitting sizes or types. Often, they are threaded with 1/2-28 or 5/8-24 threads, the two thread sizes that are arguably the most common sizes found on firearms with barrels threaded to accept various muzzle attachments. Legitimate filters are typically manufactured with National Pipe Threads (NPT), which are tapered threads designed to create a seal between the fittings when tightened. As such, a threaded adapter is required to attach a fuel filter to one of the many thread sizes found on firearm barrels. There are many such adapters marketed for use in attaching both inline and spin-on filters to threaded firearm barrels.

Findings:

Exhibit 1 consists of a cylindrical device measuring approximately 9-3/4 inches in length and 2 inches in diameter. The Exhibit bears no visible manufacturer's marks of identification or a serial number. Additionally, a box labeled "JDMSPEED MOTOR' and "Z276" are included with the Exhibit 1 device.

I disassembled Exhibit 1 to examine the interior construction of the device and discovered a replaceable filter element and a coil spring are installed in the expansion chamber created by the two end-caps and the outer tube (see attached photos).

The tube or body of the Exhibit 1 appears to be manufactured from aluminum tubing and creates an **expansion chamber** when assembled with the included end-caps. Each end of the tube contains threads that are compatible with the two end-caps of the device. The tube of the Exhibit is threaded on each end to accept end-caps. The two end-caps incorporate a rubber O-ring to create a seal between the end-caps and the interior of the tube when assembled. The end-caps are externally threaded identically and can be installed on either end of the tube.

As received, the front end-cap of the device contains a hole in its center to allow passage of a bullet. The rear end-cap also has a hole in its center that is internally threaded to facilitate attachment to a firearm barrel.

The filter element is consistent with an inline fuel filter element. It is a cylindrical assembly inserted into the tube of the device and consists of two caps, a **ported tube**, and a pleated filter element.

The ported metal tube is the main part of the filter and is designed to contain and support the filter medium. The perforations in the metal tube are to allow fluid to flow through the tube. The pleated filter medium is formed into a hollow cylinder and is located inside of the ported tube and intended to trap unwanted particles in fluid passing through. The filter element has one closed cap and one open cap to assist in directing the flow of fluid through the filter element (see attached photos).

Regarding inline fuel filter having filter elements or flow valves without center holes, U.S. Patent 4,530,417 mentions creating a center hole through baffles or wipes installed in a firearm silencer using the first round fired through the device. FTCB personnel have tested several inline fuel filters containing a filter element with a solid end-cap and/or a flow valve installed (as typically found in inline fuel filter) and determined that forming the center hole by firing through the device was practical.

Additionally, forming the center hole with the first fired round may improve the efficiency of the silencer by ensuring the center hole is aligned with the bore of the firearm and by creating the smallest hole possible to retain more propellant gases than a larger hole would. When an inline fuel filter is attached to a firearm, the filter element's caps serve as baffles, the body as a perforated tube, and the filter medium as sound dampening material. If the inline fuel filter is of the type that includes a flow valve, the flow valve will also serve as a baffle.

FTCB has determined that an inline fuel filter possessed with a firearm modified to accept it, or with an adaptor(s) designed to affix the filter to the muzzle of a firearm (multiple adapters may be required), demonstrates intent to use the inline fuel filter to silence, muffle, or diminish the report of a portable firearm; therefore, it is a "**firearm silencer**" as defined. Further, an inline fuel filter with an end-cap having threads of

the same size and pitch of those commonly found on threaded firearm barrels is a "**firearm silencer**" as defined.

Exhibit 1 is a device for silencing, muffling, or diminishing the report of a portable firearm; therefore, it is a "**firearm silencer**" by definition.

Exhibit 1 is consistent with many items misrepresented as "automotive filters" or "solvent traps" in a thinly veiled attempt at presenting a legitimate and legal use for these devices other than as firearm silencers or a combination of parts intended for use in assembling a firearm silencer. In actuality, these devices clearly meet the GCA definition of a firearm silencer and are intended to provide a means to skirt the laws and regulations governing the manufacture, sale, and transfer of firearms silencers.

Because the filter element does not incorporate a center hole at the front end to allow a bullet to pass through, I removed the filter element and coil spring prior to conducting sound comparison testing to preserve the integrity of the Exhibit.

For sound-comparison test purposes, I used ATF reference firearm #505491, a Tactical Solutions, model Pac-Lite, .22 LR caliber semiautomatic pistol from the ATF National Firearms Collection (NFC), serial number TS-03552, with and without Exhibit 1 attached. I conducted the sound-comparison testing at the ATF test range, in Martinsburg, West Virginia, on December 27, 2022, using commercially available, CCI brand, .22LR caliber standard velocity ammunition. I conducted this test in the presence of a Bruel & Kjaer, Nexus Acoustic Conditioner Amplifier, calibrated precision sound-level meter, and recorded the results.

The NFC Tactical Solutions pistol muzzle is threaded in 1/2-28 TPI as is the rear end-cap of Exhibit 1.

I followed the standard operating procedures established by ATF for conducting the testing. During this procedure, a pre and post self-test calibration verification procedure was automatically conducted. The instrument passed both the pre and post self-test calibration verifications.

The results of the testing are as follows:

NFC #505491 with no silencer	(5-shot average)	152.80 decibels
NFC #505491 with Exhibit 1 attached	(5-shot average)	140.32 decibels

The sound reduction recorded was 12.48 decibels. The test results establish that Exhibit 1 is capable of diminishing the sound report of a portable firearm.

Conclusions:

Exhibit 1, being a device for silencing, muffling, or diminishing the report of a portable firearm, is a "**firearm silencer**" as defined in 18 U.S.C. § 921(a)(25).

Exhibit 1, being a "firearm silencer," is a "**firearm**" as defined in 18 U.S.C. § 921(a)(3)(C).

Exhibit 1 is a "firearm silencer" as defined in 18 U.S.C. § 921(a)(25); therefore, it is also a "**firearm**" as defined in 26 U.S.C. § 5845(a)(7).

Exhibit 1 bears no NFA manufacturer's marks of identification or a serial number as required by 26 U.S.C. § 5842.

Examined by:

JASON ARMSTRONG

Digitally signed by JASON ARMSTRONG
Date: 2022.12.27 06:47:52 -05'00'

Jason Armstrong
Firearms Enforcement Officer

Approved by:

CODY TOY

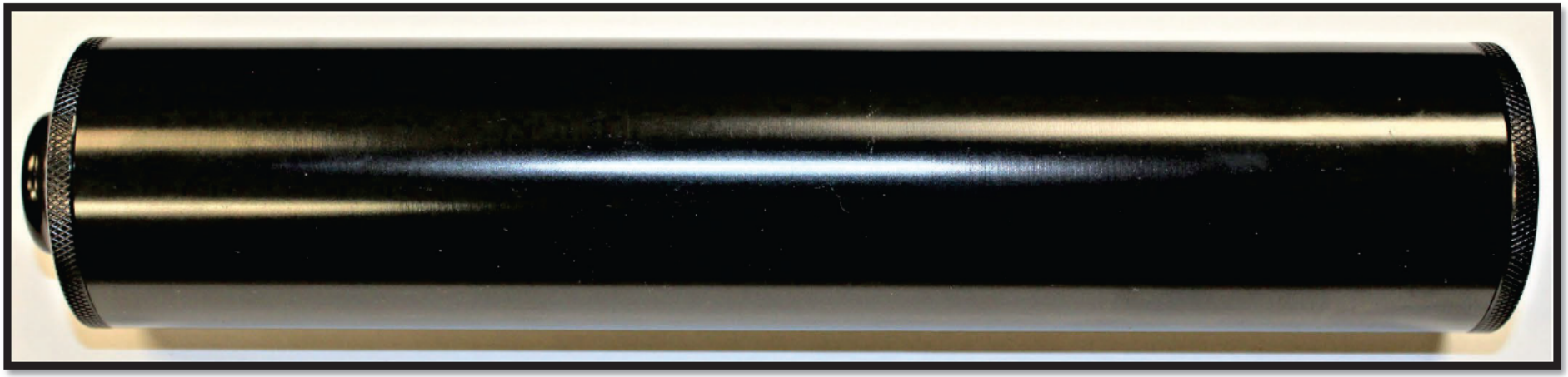
Digitally signed by CODY TOY
Date: 2022.12.28 10:58:01 -05'00'

Cody Toy
Chief, Firearms Technology Criminal Branch

Attachments: Four pages bearing photographs.

Enclosed is a Firearms Technology Criminal Branch report provided in response to your request for assistance. Please be aware that these documents constitute "taxpayer return information" that is subject to the strict disclosure limitations provided in 26 U.S.C. § 6103. Exceptions to the non-disclosure provisions that permit the disclosure internally within ATF are set forth in 26 U.S.C. §§ 6103(h)(2)(C) and (o)(1). Any further disclosure of these reports is strictly limited and must be reviewed and approved by the Office of Chief Counsel prior to any information dissemination. Failure to adhere to the disclosure limitations provided in 26 U.S.C. § 6103 could result in civil and/or criminal liability.

Exhibit 1



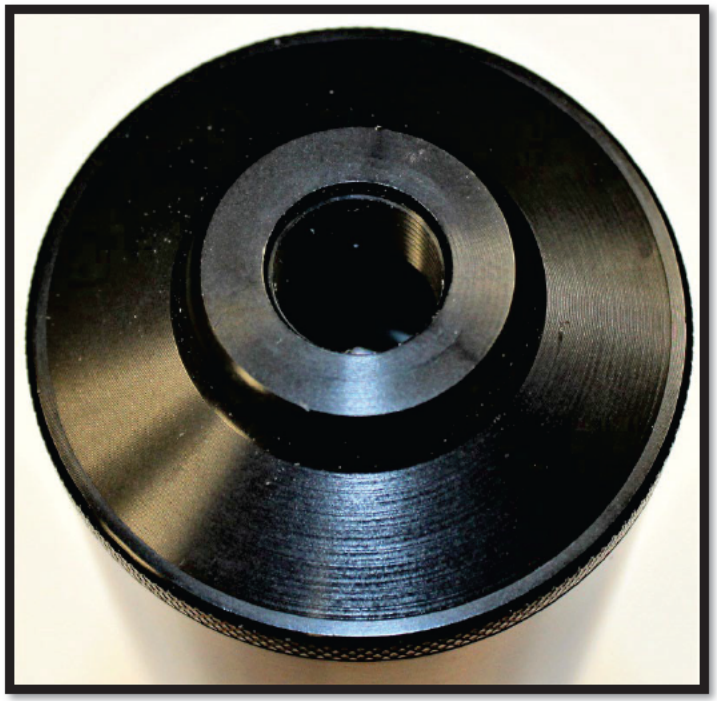
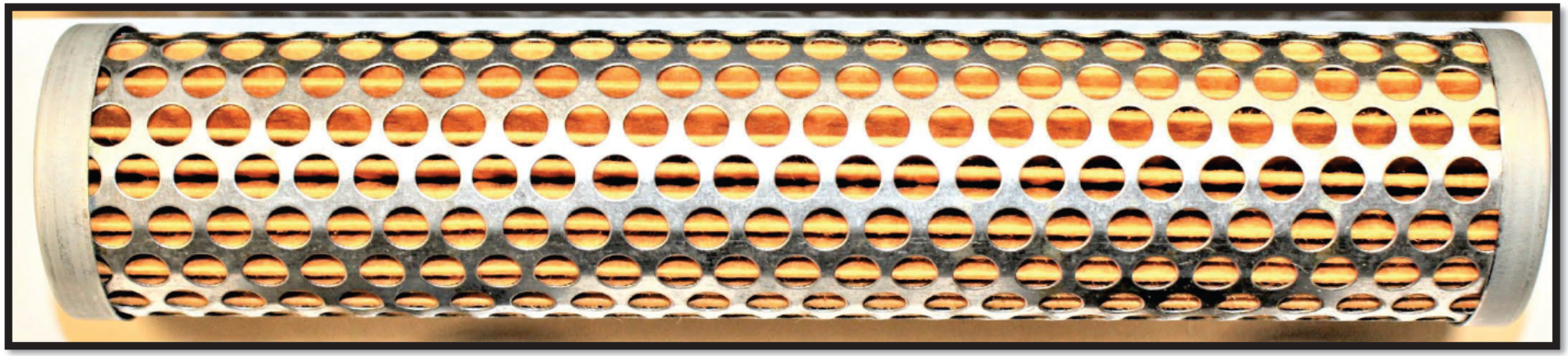


Exhibit 1

[redacted]

Inline Fuel Filter element



09043

Exhibit 1

09044

Exhibit 1

ATF Exemplar rifle barrel with 1/2-28 threads

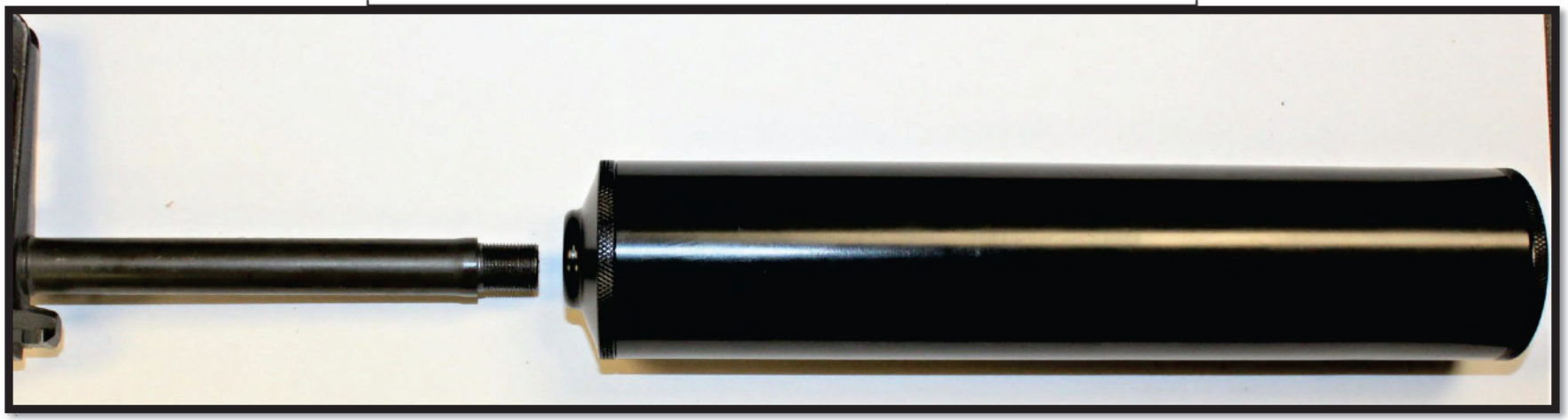


Exhibit 1 attached to ATF rifle barrel